THE CENTRAL VALLEY REGION

The Central Valley Region is the State's largest, encompassing 60,000 square miles, or about 40 percent of the State's total area. Thirty-eight of California's 58 counties are either completely or partially within the Regional Board's boundaries, formed by the crests of the Sierra Nevada on the east, the Coast Ranges and Klamath Mountains on the west, the Oregon border on the north, and the Tehachapi Mountains on the south. Included are 11,350 miles of streams, 579,110 acres of lakes and the largest contiguous groundwater basin in California. The Sacramento and San Joaquin Rivers, along with their tributaries, drain the major part of this large area through an inland Delta, prior to emptying into San Francisco Bay. The Delta is the focal point of the state's two largest water conveyance projects, the State Water Project and the federal Central Valley Project. Together, the Sacramento and San Joaquin Rivers and the Delta furnish over half of the state's water supply. The southern third of the Central Valley contains the Tulare Lake Basin, a closed hydrographic unit, except during extremely wet years. The Central Valley is one of the most important agricultural centers of the world. Its largest city is Sacramento, the state capital. The Regional Board's headquarters is in Sacramento with branch offices in Redding and Fresno.

Challenges

The Regional Board is faced with many challenges in its mission to protect water quality, including:

Regulate agricultural drainage in the San Joaquin Valley, which is high in selenium and trace elements, in a manner which protects water resources while at the same time maintaining a viable agricultural industry

Mitigate or reduce the accumulation of salts and trace elements in the San Joaquin and the Tulare Lake Basin groundwaters

Control nitrate levels in groundwater, which occur in excess of water quality standards in almost half the counties in the region; · Control storm water runoff in urban and rural areas

Mitigate the effects of abandoned mine discharges of acids and heavy metals, which impact the Sacramento River system and the Delta

Restore the water quality at military bases such as McClellan, Mather, and Castle Air Force Bases to facilitate the return of these properties to productive use

Identify and control sources of toxicity in surface waters

Develop policies for water quality protection in effluent dominated streams and constructed agricultural drains; · Reduce levels of pesticides in receiving waters

Prevent leaking underground tanks from affecting beneficial uses of groundwater.

Accomplishments

In response to the many challenges it faces, the Regional Board has achieved a number of accomplishments, including:

Initiated watershed activities involving over 500 stakeholders for the Sacramento River and for Cache Creek

Working in cooperation with approximately 30 local agencies, closed over 3,100 underground tank sites; · Developed "hot spot" cleanup plans to address dissolved oxygen and mercury problems in the Delta

Adopted the first-ever waste discharge requirements on agriculture to control selenium discharges from the Grasslands Watershed to the San Joaquin River

Restored and improved the regulation of confined animal facilities, especially dairies, by documenting violations, enforcing under Board authority and in coordination with a new multi-agency dairy enforcement task force, and working with the industry on educational programs for dairy owners/operators.

Installed both active and passive control measures to substantially reduce the discharge of acid mine drainage containing heavy metals at Iron Mountain Mine, Penn Mine, Walker Mine, Spenceville Mine, and the West Squaw Creek area mines Balaklala, Shasta King, Early Bird, Keystone and Stowell.

Provided regulatory oversight, along with DTSC and USEPA of environmental remediation activities by Aerojet-General Corporation, which is commencing remediation of an approximately 14 square mile groundwater plume in the community of Rancho Cordova, including replacement of lost water supplies due to the pollution.

Together with the Department of Pesticide Regulation (DPR) and County agricultural commissioners, facilitated the use of best management practices to help minimize the movement into surface waters of the Sacramento River Basin of irrigation return flows containing pesticides used on rice fields.

Staff Organizational Structure

Regional Board staff are headquartered in Sacramento, with branch offices in Redding and Fresno. Although Sacramento houses the Executive Officer and serves as the Board's headquarters, each office is responsible for specific geographic areas and for implementing the applicable programs within those areas.

The Sacramento Office has program responsibilities in both the Lower Sacramento River Watershed (Colusa, Glenn, Sacramento, Sutter, Yolo, and Yuba Counties, and the Central Valley portion of El Dorado, Lake, Napa, Nevada, Placer, Sierra, and Solano Counties); and the Lower San Joaquin River Watershed (Amador, Calaveras, San Joaquin, Stanislaus, and Tuolumne Counties; and portions of Alameda, Alpine, and Contra Costa Counties that are in the Central Valley) including the Sacramento-San Joaquin Delta. This office also provides administrative, technical and information technology support, fosters programmatic consistency, and coordinates enforcement activities for the entire region.

The Fresno Office has program responsibilities in the Upper San Joaquin River Watershed and the Tulare Lake Basin (Fresno, Kings, Madera, Mariposa, Merced, and Tulare Counties; and the portions of Kern, Los Angeles, San Benito, San Luis Obispo, and Ventura Counties that are in the Central Valley).

The Redding Office has program responsibilities in the Upper Sacramento River Watershed (Butte, Plumas, Shasta, and Tehama Counties; and the parts of Lassen, Modoc, and Siskiyou Counties that are in the Central Valley).

View the Organization Chart of the Central Valley Regional Board.

Major Programs

Agricultural Regulatory
This program involves regulation of activities related to agricultural production, including commercial nurseries and fertilizer and pesticide applicator sites. Significant work is occurring in the following areas: Selenium in San Joaquin River -- In 1996, the Regional Board adopted a Basin Plan amendment outlining their approach to regulation of agricultural drainage that contains selenium. A major step was the Board's adoption of waste discharge requirements (WDRs) in July 1998 on the discharge of agricultural drainage into the San Joaquin River. Staff is now assessing compliance with those WDRs. This is the first time that a permit has been used in the nation to regulate a non-point source from irrigated agriculture. Rice Pesticide Program -- In the Sacramento River Basin, the Board works with the Department of Pesticide Regulation (DPR) and other agencies on the Rice Pesticide Program. The Basin Plan contains a conditional prohibition of discharge that applies to irrigation return flows containing five pesticides used on rice fields. DPR and the agricultural commissioners have established a pesticide regulatory program designed to minimize the movement of these chemicals into surface waters and the Board has waived the prohibition of discharge based on this program. Water quality monitoring is conducted to assess the success of the control efforts and DPR submits annual reports on program activities. The Board reviews and approves the DPR program every three years to determine whether it continues to satisfy the conditions needed to waive the prohibition of

discharge. The Regional Board agreed to develop and adopt water quality objectives for the five pesticides used by the rice industry. Salinity and Boron in the San Joaquin River -- Water quality in the San Joaquin River has degraded significantly since the late 1940s. During this period, salt concentrations in the River near Vernalis have doubled and boron levels have increased. Recognizing the importance of controlling salts in the San Joaquin River to restoring beneficial uses, the Board instructed staff to develop a program to control salts in the San Joaquin River, which may require the State Water Board to consider other management steps for the River, or the Regional Board to consider tighter discharge controls on all types of discharges, including agriculture.

Above-Ground Tanks(AGT)
The AGT program oversees regulation and cleanup of aboveground fuel tanks. AGT facilities with a single tank capacity greater than 660 gallons or with a cumulative storage capacity greater than 1,320 gallons are required to register their tanks with the state, pay fees, and prepare a site-specific Spill Prevention Control and Countermeasure plan. Staff inspects AGTs to determine compliance with AGT regulations. Once staff identifies a release, AGTs are required to investigate and remediate contamination and reimburse the region for the cost of staff overseeing cleanups at their sites.

Basin Planning
Basin Plans (one for the Tulare Basin and one for the Sacramento River and San Joaquin River Basins) and the planning process associated with them are required by both federal and state law. The Basin Plans are the framework for the Regional Board's activities. They include designation of beneficial uses of waters, water quality objectives to meet those uses and description of programs and actions that need to be implemented to achieve the objectives. For surface waters, these components are water quality standards under federal law. Every three years, a comprehensive review of the Basin Plan is conducted to determine whether revisions are needed. The Regional Board has determined that the following issues are high priority: · Regulatory guidance to address water bodies dominated by NPDES discharges; · Regulatory guidance for salinity and boron discharges to the San Joaquin River; · Organophosphate (OP) pesticide control efforts; · Groundwater quality issues in the Tulare Basin; · Policies for maintaining drinking water quality in the Delta; · Mercury load reduction program; · Dissolved oxygen problems in the San Joaquin River near Stockton; and · Regulatory policies for selenium in the San Joaquin River.

CALFED
The CALFED Bay-Delta Program started in June 1995 as a collaborative effort of state and federal interests to address a declining ecosystem, uncertain water supplies, imperiled water quality, and unstable levees in the Sacramento-San Joaquin Delta and San Francisco Bay. The CALFED mission is to develop a long-term plan that will restore ecological health and improve water management for beneficial uses of the Bay-Delta system. One element of the CALFED mission is to identify and facilitate correction of water quality problems that impact beneficial uses. Regional Board input has been instrumental in assisting CALFED in identifying priority water quality issues, identifying information and research gaps and determining priority actions needed to address problems.

Confined Animal Facilities
There are approximately 1600 dairies in the region plus 200 to 400 other poultry, swine and beef operations. Waste production at most sites is equivalent to that of a small city. Animal wastes contain ammonia, nitrates, salts and pathogens that impact surface water when discharged. Because of the density of animals at these sites, nitrate and salt also pose a very serious threat to groundwater in the Central Valley, unless the wastes are properly managed. Staff works with the dairy industry to encourage use of appropriate waste management practices and takes regulatory action when dairies follow practices that clearly pose a threat to water quality.

Department of Defense and Department of Energy (DOD/DOE)
The DOD/DOE program provides oversight of groundwater and soil cleanup at military and other federal facilities, often-large sites with a complex list of contaminants. Many of the facilities are federal Superfund sites and USEPA is involved in addition to the State Department of Toxic Substances Control (DTSC). These sites have extensive groundwater contamination, often impacting public water supplies in the area. The cleanup work is performed in compliance with CERCLA (the Comprehensive Environmental Response, Compensation and Liability Act; the federal Superfund law), which constrains the normal enforcement capabilities of the Regional Board.

Landfills and Mining
The Chapter 15/Title 27 program is named after the places in the California Code of Regulations where the regulations under which the program operates are found. The program applies to wastes discharged to land that need to be contained to protect water quality--primarily groundwater. Hazardous waste sites, landfills, surface impoundments, brine discharges, mines, and other industrial wastes that contain high levels of constituents that would degrade groundwater are addressed by the program. The regulations contain specific requirements for waste management unit design, such as liners, covers and closure. Groundwater monitoring wells and unsaturated zone monitoring are ordinarily required. Regulatory work includes writing waste discharge requirements, performing compliance inspections and preparing enforcement actions.

Non-Point Source(NPS)
Non-point sources of contamination are responsible for most of the significant impairments in the region's surface water bodies. Non-point source discharges include agricultural, forestry, and grazing operations. The most significant problems are elevated levels of pesticides, selenium, salt, mercury and heavy metals. Other impairments result from low dissolved oxygen, temperature changes, sediment, ammonia and various contaminants that threaten drinking water.

Spills, Leaks, Investigations, and Cleanups (SLIC)
SLIC sites are sites where unauthorized releases of chemicals have occurred and are polluting or threaten to pollute California's water resources. Over 800 of these sites exist in the region, and more continue to be discovered . These release sites are not regulated under the waste discharge permit program or other similar regulatory programs designed to control or prevent the discharge of pollutants, but are reported after the discharge has occurred and water quality often is seriously impaired. The Regional Board learns of the unauthorized discharges through investigations associated with contaminated drinking water wells, public complaints, routine environmental sampling, referrals from other agencies, and disclosures from the dischargers. Frequently, the cause or source of the water pollution is not easily identifiable, and investigative work is needed to trace the pollution to a probable responsible party.

Storm Water
There are two major components to the storm water program, the municipal program and the industrial program. The municipal program involves urbanized areas of 100,000 or more population and requires the Regional Board to adopt permits for their discharges. Currently, Stockton, Port of Stockton, Sacramento, Modesto, Contra Costa County, Fresno and Bakersfield are the only areas with permits in the region. New federal regulations are reducing the size of cities that need permits to 10,000 population. The State Water Board has adopted two statewide general permits to regulate storm water runoff from industrial and construction sites. In the Central Valley, there are approximately 1,850 facilities covered by the state's General Permit for Storm Water Discharges Associated with Industrial Activities. Staff efforts are focused on evaluating compliance with general permit requirements and identifying dischargers that have not filed to be covered under the general program.

Total Maximum Daily Load (TMDL)
Section 303(d) of the federal Clean Water Act requires the Regional Boards to submit lists of impaired water bodies to USEPA for their approval. Load reduction plans, called Total Maximum Daily Loads or TMDLs, are required to be developed for all listed water bodies. The requirements for TMDLs are consistent with responsibilities for protecting water quality under state law. The elements of a TMDL include a problem statement, numeric target, source analysis, allocations, description of how allocations relate to meeting targets, margin of safety, and an implementation plan, including monitoring. Currently, there are more than 50 water bodies in the region that are considered impaired, many for multiple pollutants. High priority has been placed on completing TMDLs in the major rivers and the Delta. The main focus in the San Joaquin River watershed is salt, boron, selenium and OP (organophosphate) pesticides. In the Sacramento River watershed, the focus is OP pesticides, mercury and heavy metals. In the Delta the focus is mercury, OP pesticides and low dissolved oxygen.

Underground Storage Tanks (UST)
The UST Program includes: leak prevention, oversight of leaking underground tank cleanups and reimbursement to responsible parties conducting cleanups. Regional Board staff is primarily involved with oversight of cleanups. Staff also works very closely with Local Implementing Agencies who have

various responsibilities in the UST Program. When these local agencies determine that groundwater is threatened or contaminated, they generally refer underground tank cases to the Regional Board. Currently, our Board is the lead agency in oversight work for almost 1,400 leaking underground tank cases. We also work closely with the State Water Board's Cleanup Fund, which provides funding to responsible parties for investigation and remediation of leaking underground storage tank sites.

Wastewater Discharges to Land
Discharges of wastewater to land are commonly called "Non-Chapter 15" or "Non-15" discharges, in reference to the group of wastes excluded from the full containment, prescriptive requirements of Chapter 15/Title 27 (see above) that apply to hazardous, designated and other wastes. The Program involves: adopting waste discharge requirements which specify acceptable levels of pollutants which may be discharged, special studies to be conducted, and a monitoring program to assess compliance; compliance evaluation by staff through field inspections and review of submitted monitoring reports; and enforcement ranging from phone calls and letters to Regional Board or Attorney General enforcement actions. The program currently regulates nearly 1500 dischargers in this region.

Wastewater Discharges to Surface Waters (National Pollutant Discharge Elimination System (NPDES))
The NPDES Program is the federal permitting program for discharges of pollutants to surface waters from "point sources." USEPA and the State/Regional Boards administer the program. Permits adopted by the Board implement both federal and state law. The Program involves: adopting NPDES Permits which specify acceptable levels of pollutants which may be discharged, special studies to be conducted, and a monitoring program to assess compliance; compliance evaluation by staff through field inspections and review of submitted monitoring reports; and enforcement ranging from phone calls and letters to Regional Board or Attorney General enforcement actions. For the whole region, there are over 350 permitted facilities, of which there are: individual permits on over 110 municipal discharges; over 170 individual permits on industrial and other discharges; and approximately 60 industrial facilities operating under general permits.

Water Quality Certification
This program regulates hydrologic modification projects, especially those that directly impact wetlands and riparian habitats. By federal law, every applicant for a federal permit or license for an activity which may result in a discharge into a water body must request state certification that the proposed activity will not violate state and federal water quality standards. The state can certify the activity, or deny certification. In addition, requests for water quality certification involving re-licensing of hydro-electric projects fall under this program. Staff activities include screening of application packages, site visits, meetings and preparation of recommendations for Regional Board consideration.

Watershed Management
Watershed Management involves the development of watershed-wide programs to protect water quality. The main premise of the Watershed Management Initiative is that Regional Board actions and decisions should be guided by consideration of water quality related impacts within the context of a watershed. The ultimate goal is to fully integrate water quality monitoring, assessment, planning, standard setting, permit writing, non-point source management, groundwater protection and other programs to promote efficiency in Board programs. The Sacramento River Watershed Program (SRWP) is a stakeholder group dedicated to stewardship of the Sacramento River Watershed. The cornerstones of the SRWP are:

1. the water quality monitoring program,
2. the education and outreach program,
3. water quality management strategies for contaminants, and
4. providing information exchange and assistance for tributary watershed groups.

The SRWP is developing water quality management strategies for OP pesticides and mercury, which are expected to provide the technical information necessary for completion of TMDLs for the Sacramento River. Working with locally directed watershed protection programs is viewed as a high priority activity in accomplishing our non-point source pollution control objectives.